ABSTRACT:

The subject invention relates to a method of transdifferentiating mammalian non-pancreatic stem cells, such a mesenchymal stem cells (MSCs), to enter the pancreatic differentiation pathway. The MSCs are cultured under conditions that permit the expression of pancreatic differentiation markers, and these conditions include use of: (a) culture conditions that promote cell clustering; and/or (b) medium comprising glucagon-like peptide-1(GLP-1), hepatocyte growth factor (HGF) and/or nicotinamide.

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(57) Abstract: The subject invention relates to a method of transdifferentiating mammalian non-pancreatic stem cells, such as mesenchymal stem cells (MSCs), to enter the pancreatic differentiations pathway. The MSCs are cultured under conditions that permit the expression of pancreatic differentiation markers, and these conditions include use of: (a) culture conditions that promote cell clustering; and/or (b) medium comprising glucagon-like peptide-1(GLP-1), hepatocyte growth factor (HGF) and/or nicotinamide.